

# Distribution and intensity of fallout from the underground shot. Project 2. 5. 2 (of) Operation TEAPOT

## Abstract

One phase of the over-all fallout studies on the underground detonation during Operation TEAPOT was to make total fallout collections defining the magnitude and extent of the entire fallout event in terms of quantity of material dispersed and deposited. Such information was required to supplement and extend data from previous surface and subsurface tests, both nuclear and high explosive, and to test and improve prediction methods developed from these data. Material and radioactive fallout was documented by sampling the fallout at an array of ground stations deployed to include the major portion of the residual field. Limited time-sampling of fallout was performed, and duplicate total fallout-collection stations were employed to check validity of the total-fallout-collection techniques. Results have been converted to a unit-area basis and recorded according to position in the master-station locator plan established for all Military Effects Group fallout studies. It is estimated that  $9.16 \times 10^6$  pounds of soil, which comprises 3.6% of the total crater material, and  $2.9 \times 10^{22}$  fissions, which comprises 17% of the fission yield for the device, were deposited in the sampled area. Adequate data were obtained to show the variation in mass and radioactivity with distance in all directions [more »](#)

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